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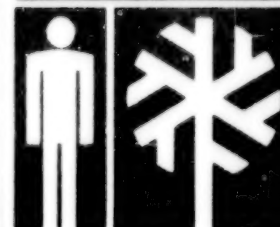
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environmental assessment
AMENDMENT TO THE 1976 MASTER PLAN

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WHISKEYTOWN UNIT
WHISKEYTOWN-SHASTA-TRINITY

NATIONAL RECREATION AREA/CALIFORNIA



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ENVIRONMENTAL ASSESSMENT
AMENDMENT TO THE 1976 MASTER PLAN

WHISKEYTOWN UNIT
WHISKEYTOWN/SHASTA/TRINITY NATIONAL RECREATION AREA
California

August 1988

U.S. Department of the Interior / National Park Service

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PURPOSE OF AND NEED FOR THE PLAN

The Whiskeytown unit was established by Public Law 89-336 on November 8, 1965 as part of the Whiskeytown-Shasta-Trinity National Recreation Area. The Whiskeytown unit is administered by the National Park Service (NPS) under the Secretary of the Interior, while Shasta-Trinity is administered by the U.S. Forest Service (USFS) under the Secretary of Agriculture.

Whiskeytown is one of five national recreation areas managed by the National Park Service that is open to mineral leasing if specified resource protection and administrative objectives can be met. Until 1984 mineral leases were considered on the basis of an Excepted Areas map which was developed from the Management Zoning map in the unit's 1976 Master Plan. That map left 25,430 acres of the area open to consideration for mineral leasing and closed (Excepted) the remaining 17,073 acres to leasing. In 1984, as a result of lawsuits regarding permit and leasing procedures at other units of the National Park System, a moratorium was placed on leasing within the Whiskeytown unit while the National Park Service re-evaluated its mineral planning process.

As a result of that re-evaluation, mineral leasing and its effects on park resources is being looked at much more closely in the areas where it is permitted. The mineral planning process begins by reviewing the area's enabling legislation which states the purpose of the area, features to be protected, and activities to be permitted. This legislation states that the Whiskeytown-Shasta-Trinity Recreation Area was established

. . . for the public outdoor recreation use and enjoyment of the Whiskeytown, Shasta, Clair Engle, and Lewiston reservoirs and surrounding lands in the State of California by present and future generations and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters. . . .

The legislation further states that the area should be administered in such a manner that

. . . will best provide for (1) public outdoor recreation benefits; (2) conservation of scenic, scientific, historic, and other values contributing to public enjoyment; and (3) such management, utilization, and disposal of renewable natural resources as in the judgment of the respective Secretary will promote or is compatible with, and does not significantly impair, public recreation and conservation of scenic, scientific, historic, or other values contributing to public enjoyment. Such administration shall be carried out under land and water use management plans which each Secretary shall prepare

The legislation also permits (subject to appropriate regulations) hunting, fishing, and mineral development. Regarding mineral development the legislation states:

The lands within the recreation area, subject to valid existing rights, are hereby withdrawn from location, entry, and patent under the United States mining laws. The Secretary of the Interior, under such regulations as he deems appropriate, may permit the removal of the nonleasable minerals from lands or interests in lands under his jurisdiction within the recreation area in the manner prescribed by section 10 of the Act of August 4, 1939, as amended (53 Stat. 1196; 43 U.S.C. 387) . . . and he may permit the removal of leasable minerals from lands or interests in lands within the recreation area in accordance with the Mineral Leasing Act of February 25, 1920, as amended (30 U.S.C. 181 et seq.), or the Acquired Lands Mineral Leasing Act of August 7, 1947 (30 U.S.C. 351 et seq.), if he finds that such disposition would not have significant adverse effects on the purposes of the Central Valley project or the administration of the recreation area

The basic issue is to determine which areas, if any, where mineral development would be compatible with " . . . the conservation of the scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters"

Although the 1976 Master Plan is still adequate for dealing with the recreational issues facing the area, the management zoning developed in that plan is far too general to address specific land management issues such as minerals management. The area's Statement for Management (1983) does contain a management objective for minerals management: "Manage nonrenewable resources in such a way that their disposal will have no substantial effect on recreation and still preserve the natural and cultural resources of the area." However, neither the Existing Management Zoning map in the Statement for Management nor the 1976 Mineral Leasing and Expected Areas map, sufficiently examine the area's resources to determine what lands must be protected to fulfill the enabling legislation and which can remain open to mineral development without damaging these resources. It is the purpose of this document to conduct such an evaluation.

Since, the 1976 Master Plan is still valid for recreational issues but needs to be updated for minerals management, this plan will be an amendment to the master plan which will specifically address minerals management only. As such this document will:

- 1) Review and revise the management zoning scheme in the 1976 Master Plan. Several alternative zoning schemes, with respect to minerals management, will be developed.
- 2) Evaluate the impacts of each alternative management zoning scheme.
- 3) Propose a preferred alternative.

INTERRELATIONSHIPS WITH OTHER STUDIES, PLANNING EFFORTS, AND PROPOSALS

1976 Master Plan

This plan is still valid for all issues facing the unit except minerals management. Once this amendment is approved it will become part of the master plan. The new management zoning map prepared in this amendment will replace the management zoning map in the master plan.

Land Protection Plan

This master plan amendment, through its management zoning, identifies which nonfederal areas should be managed to protect scenic, scientific, and educational features and provide for visitor use and those areas where other uses would be compatible. The land protection plan identified strategies for protecting the nonfederal lands within the unit boundaries, and it determined the minimum federal interests needed for protecting the unit's resources.

The land protection plan identified six private tracts in fee ownership within the unit, all with improvements and totaling 15.23 acres. Five of the tracts are in residential use. In addition, five acquired tracts (211.5 acres) are subject to mineral reservations. Since the completion of the land protection plan an additional tract (4.10 acres) with mineral rights has been identified. Total acreage affected by these six tracts with mineral rights is 215.6 acres. They are all currently undeveloped. The land protection plan stated that none of the six fee-title private tracts is adversely affecting unit resources, operations, or visitor experiences to any significant degree. As long as the present uses continue, the tracts can be considered to be compatible with unit management objectives. More intensive uses, e.g., change to intensified commercial use or subdivision into smaller parcels with additional structures, would be expected to increase scenic impacts and possibly produce operational problems and would not be compatible with the unit's management objectives.

The zoning ordinance adopted by Shasta County essentially precludes intensification of use on all private tracts. Since that is the case, the land protection plan recommended that land use regulation under the Shasta County ordinance continue to provide land protection for the remaining private tracts and outstanding mineral interests in the Whiskeytown unit. Acquisition will be pursued only if: (1) a property is made the subject of a variance to the zoning ordinance which does not conform to the regulations in 36 CFR 30; or (2) the Park Service obtains knowledge of plans to put a property to any use which is not in conformance with the zoning ordinance, the minerals management plan, or the federal regulations, and all legal remedies available through the courts to enforce the regulations have been exhausted.

Minerals Management Plan

In areas such as Whiskeytown where mineral leasing and other mineral activity can be considered, a minerals management plan is generally prepared that details how mineral activity will be controlled within the unit. The minerals management plan specifies management objectives for lands remaining open for leasing consideration and additional surface protection stipulations needed to protect resource values within those areas. The minerals management plan covers such things as standard surface protection stipulations which will be required on each lease and permit issued to protect particular resource values and/or visitor safety in the park. Stipulations may include provisions to ensure protection of the visual integrity of views from the lake and major park roads, provisions regarding access and facilities siting, road construction standards, and reclamation of the site following abandonment. Along with development of the minerals management plan, the excepted areas defined in 43 CFR 3109.2(d)(1) and 3100.0-3(g)(4) are revised to be consistent with the selected alternatives for the master plan amendment.

There is currently no approved minerals management plan. Since 1984 the area has been operating under a moratorium on leasing. Until 1984 mineral leasing and development were managed according to the Mineral Leasing and Excepted Areas map (see No Action Alternative map). Once this document has been reviewed and finalized the selected alternative for management zoning will define those areas within the unit that will be open for consideration of mineral leasing and development. The only areas where these activities would be permitted would be the resource utilization subzone of the special use zone. Since in the preferred alternative the resource utilization subzone includes only 1,575 acres, a separate minerals management plan will not be required. Minerals will be managed within this subzone and for all valid existing rights within the unit according to existing NPS regulations on minerals management. The Excepted Areas map will, however, be revised to be consistent with the selected alternative management zoning scheme from this master plan amendment.

Environmental Assessment - Gold Panning (July 1987)

Clear Creek and its tributaries have been areas of extensive prospecting, exploration, and mining for placer-gold since 1848. Dredging operations have occurred within and adjacent to Clear Creek, Boulder Creek, and Paige Boulder Creek. There have been no sustained commercial placer mining operations in the unit since the late 1940s. As a result of the extensive mining that occurred in the past and to prevent future damage, streams in the unit need to be strictly protected. To accomplish this, only recreational gold panning will be permitted in unit streams including those streams within the resource utilization subzone. Recreational gold panning would be permitted in the unit under final regulations soon to be published in the Federal Register. Before these regulations were finalized, they were evaluated in an environmental assessment issued in July, 1987, and published as proposed regulations in the Federal Register in February, 1988.

ALTERNATIVES INCLUDING THE PROPOSED ACTION

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ALTERNATIVES INCLUDING THE PROPOSED ACTION

INTRODUCTION

Management zoning determines how specific lands are to be managed to protect resources and to provide for visitor use. Depending on what natural and cultural resources are present and on existing and proposed management emphasis, the National Park Service classifies park lands as belonging to one of four zones--natural, historic, development, and special use. Within each of these zones, subzones may be designed to allow for particular management needs. The management emphasis for zones is defined in the NPS Planning Process Guideline (NPS-2). NPS guidelines have changed since 1976 when the Whiskeytown master plan was prepared. Although the management emphasis has changed for all zones the most substantial change occurs in the natural zone. In 1976 intensive resource uses such as mineral development were allowed in the natural zone. Under present NPS policies, such activities can only occur within the resource utilization subzone of the special use zone.

The management emphasis for each zone and subzone at Whiskeytown is explained in table 1, along with examples of each and the proposed acreage. Since the management zones for the proposed action and alternative C were prepared under current NPS guidelines, the management emphasis is the same for these two alternatives. Since the management zones for the no-action alternative were prepared under 1976 NPS guidelines, direct comparison to the other two alternatives is not possible. The no-action alternative has therefore been excluded from the table.

A) PROPOSED ACTION

All lands within Whiskeytown were evaluated according to four criteria, which were developed from the purpose of the unit as stated in the enabling legislation--the scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters. On the basis of this evaluation, the lands were placed in the most appropriate management zone and subzone. The criteria and the most appropriate management zones are described below:

- 1) Scenic features--lands of outstanding natural beauty or lands important for preserving scenic viewing opportunities in the unit, including the foreground and background of an outstanding natural feature, views from the lake, major developed areas, and scenic tour or access routes. Lands of outstanding natural beauty were put in the outstanding natural feature subzone; lands that are important for preserving the scenic viewing opportunities within the unit were put in the natural environment subzone. Scenic viewsheds used for determining which lands were important for preserving such scenic viewing opportunities are shown on the following map.

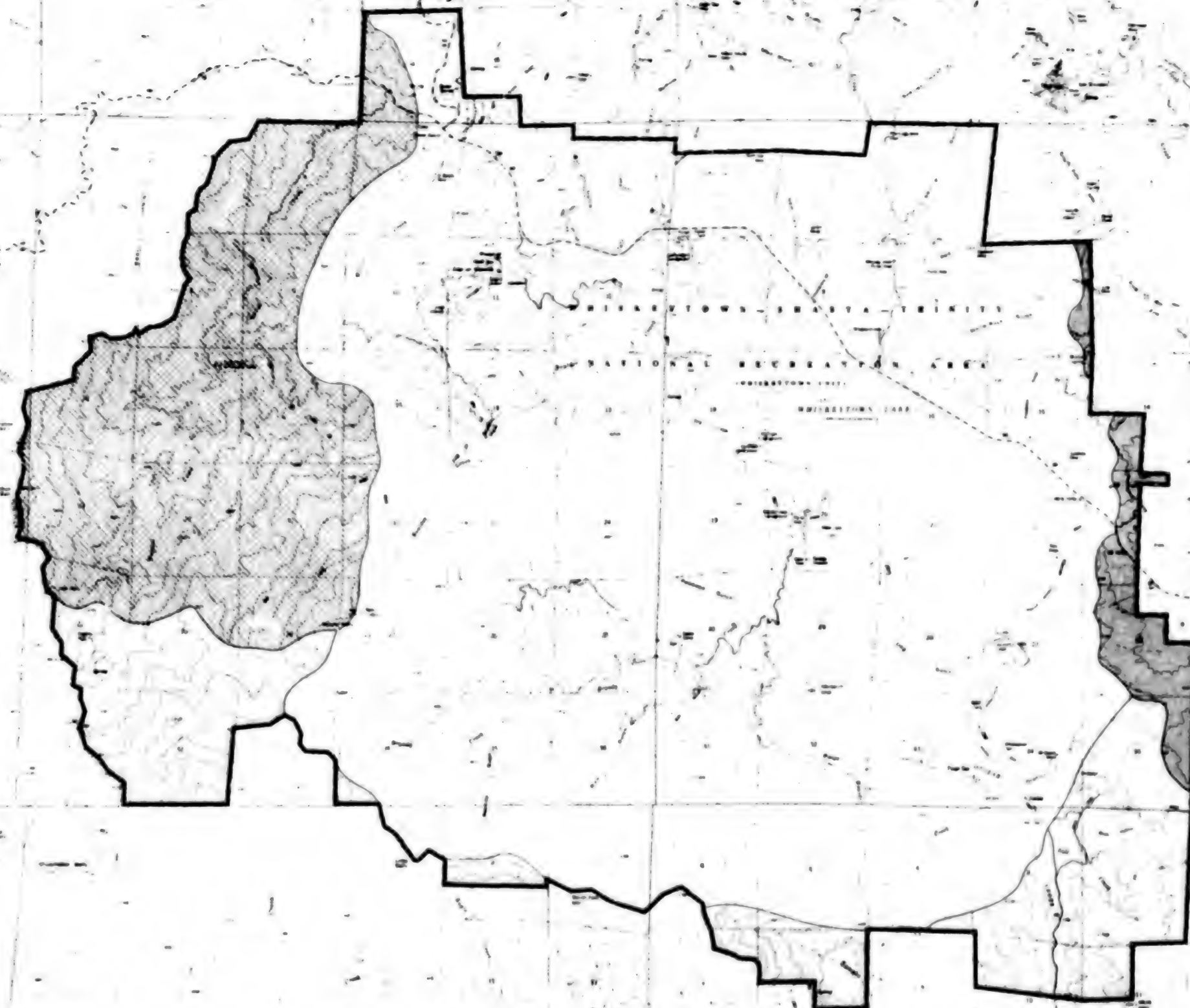
Three major viewsheds are shown. The Whiskeytown Lake viewshed which includes all areas visible from the lake and which provides a visual backdrop to the lake. Protection of this viewshed allows recreation to occur within a natural setting. The Crystal Creek viewshed, which preserves scenic views from a very popular visitor drive. The Redding viewshed protects a prominent ridge at the entrance to the unit which is very visible from the city of Redding. Lands indicated within other viewsheds are not as important for protecting scenic features in the unit.

- 2) Scientific features--lands important for the preservation of unique geological features and natural ecosystems, including areas with rare, threatened, endangered, endemic, or protected plant and wildlife species or habitat; important natural areas such as virgin timber stands; and areas of unusual or unstable soils. Lands meeting this criterion were zoned either natural environment, environmental protection, or outstanding natural feature.
- 3) Historic features--Lands containing identified historic and archeological sites. Although other activities might occur in this small zone, they must be compatible with the larger zone surrounding the historic zone.
- 4) Other Values Contributing to Visitor Enjoyment--Lands important to provide for visitor use and visitor safety and to fulfill visitor expectations. Lands providing opportunities for or support of these activities were considered important for visitor use and to fulfill visitor expectations. Such lands would include developed areas and access routes that were zoned development; the lake which was zoned special use; the shoreline of the lake, popular coves, and backcountry use areas which were zoned natural environment; and important scenic features which were zoned natural environment or outstanding natural features. Lands that were heavily used such as popular access routes, developed areas, coves, and the lake were also considered important for visitor safety.

Lands not meeting any of the above criteria were placed in the special use zone. Those lands important for Bureau of Reclamation or power transmission were placed in the Bureau of Reclamation project lands subzone or utility corridor subzones of this zone. Lands that did not meet any of the management zoning criteria or were not placed in the above three subzones were placed in the resource utilization subzone of the special use zone. Resource development such as mineral leasing will be considered within this subzone, as such development is not expected to cause major damage to the features that the unit was set up to protect.

The results of the management zoning evaluation process for the proposed action are shown in table 2, and the areas are located on the proposed action management zoning map. The total acreages for each zone for the proposed action and alternative C are summarized in table 1.

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-  WHISKEYTOWN AREA VIEWSHED
-  RYPTAL TRINITY VIEWSHED
-  REDDING VIEWSHED
-  OTHER VIEWSHED

N

SCENIC VIEWSHEDS

WHISKEYTOWN UNIT
WHISKEYTOWN / SHASTA / TRINITY
NATIONAL RECREATION AREA
CALIFORNIA

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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Table 1: Categories for Land Management and Use¹

	Management Emphasis or Use	Example Areas	Acreage/Percentage of the National Recreation Area	
			Proposed Action	Alternative C
<u>Natural Zone</u>	Conservation of natural resources and processes, and accommodation of uses that do not adversely affect these resources and processes		34,375/81	35,950/85
Outstanding Natural Feature	Public appreciation and interpretation of geological or ecological features possessing unusual intrinsic value or uniqueness; interpretive trails and wayside exhibits allowed	Clear Creek Canyon, Crystal Creek and Brandy Creek Falls	455/1	455/1
Environmental Protection	Perpetuation of geological or ecological values, minimal human intrusion; lands and waters set aside for strict protection because of unusual fragility or ecological significance; interpretive trails and wayside exhibits allowed	Virgin timber stands, Bald Eagle nesting areas, <u>Arnica venosa</u> habitat	4,481/11	4,481/11
Natural Environment	Conservation of natural resources and values that are not protected under one of the other two subzones in this zone; provisions for environmentally compatible recreation facilities (hiking and interpretive trails, wayside exhibits, primitive campsites without water, and temporary research facilities where recreational activities are not now occurring)	Whiskeytown Lake, Crystal Creek, and Redding viewsheds	29,439/69	31,014/73
<u>Historic/Archeological Zone</u>	Preservation, protection, and interpretation of cultural resources and their settings	Tower House Historic District, Clear Creek Archeological District	1,160/3	1,160/3
<u>Park Development Zone</u>	Provision and maintenance of park development to serve the needs of visitors and management operations; including vehicular circulation within the park (trails, paved and unpaved roads, and other transportation facilities used regularly by park management and the public)	Park headquarters and visitor center, Oak Bottom and Brandy Creek developed areas, Clear Creek N.E.E.D. Camp, Judge Francis Carr Powerhouse Area, all campgrounds and picnic areas	1,169/3	1,169/3
<u>Special Use Zone</u>	Permitted uses carried out by other governmental agencies or private interests on lands within park boundaries; no direct administrative control, or control secondary to that of another party		5,799/13	5,799/13
Reservoir	The reservoir subzone includes all waters impounded behind Whiskeytown dam. NPS management is limited to recreational use only; these waters are also managed by the Bureau of Reclamation for flood control, state commitments of water, irrigation, and power generation	Whiskeytown Lake	3,200/7	3,200/7

	Management Emphasis or Use	Example Areas	Acreage, Percentage of the National Recreation Area	
			Proposed Action	Alternative C
Bureau of Reclamation Project Lands	This subzone includes all lands managed by the Bureau of Reclamation to fulfill purposes of the Central Valley project; these lands are the subject of a July 1983 Memorandum of Agreement between NPS and Bureau of Reclamation	Whiskeytown Dam and related facilities, Clear Creek and Spring Creek Tunnels	390/0.9	390/0.9
Special Use	Lands used by privately owned and operated concerns that provide public services under NPS permit	Crystal Creek Conservation Camp, Shasta Baldy Radio Towers	44/0.1	44/0.1
Utility Corridor	The utility corridor subzone includes these corridors used for aerial transmission lines, managed rights-of-way for underground utilities, pumping stations, storage facilities, and similar developments operated primarily or exclusively to provide service to areas outside the park	All major power transmission lines in the unit	590/1	590/1
Resource Utilization ²	The resource utilization subzone is intended to show which lands the National Park Service considers suitable for consideration of prospecting or mineral leasing; this is the only subzone where mineral leasing and development is permitted.	Area 27 Management Zoning map	1,575/4	0/0
Total			42,503/100	42,503/100

1. Since alternative B (no-action) has different management zoning categories, it is excluded from this table.

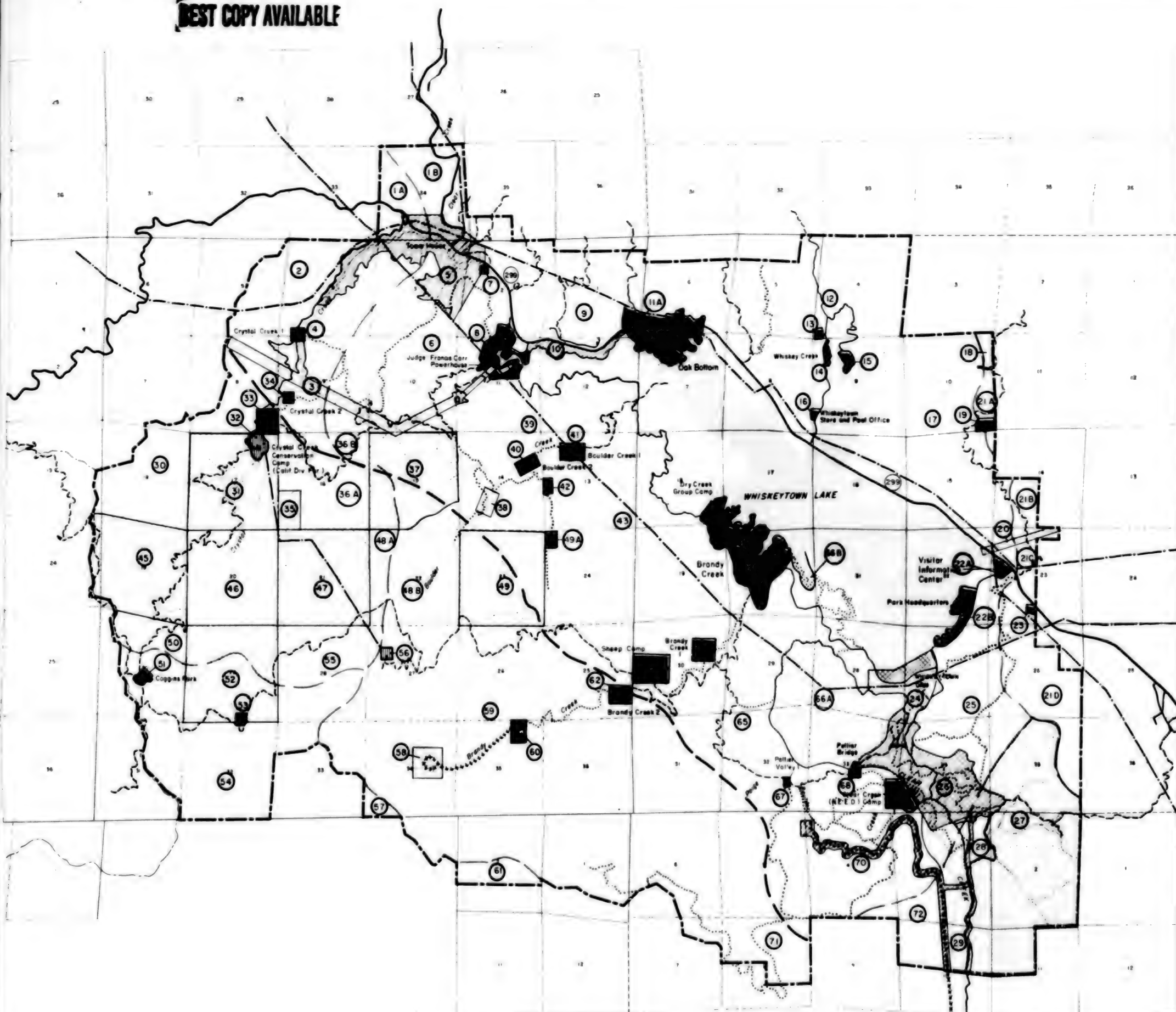
2. Those portions of the unit within the Resource Utilization Zone are open for consideration of leasing; however, they may not be totally available for mineral leasing or development. Further site-specific analyses of potential mineral activities and their impacts are required to ensure that there would be no significant adverse effects on resources or administration of the unit by granting a mineral lease or permit. The degree to which adverse effects may occur is based not only on the location and resources of the potential lease area, but also on what types of activities are proposed. An area may be suitable for underground mining but not suitable for strip or surface mining, for example, because of visual or scenic values. At the same time, site-specific analyses could result in the discovery of natural or cultural resources of such magnitude or significance that would preclude any kind of ground disturbing activities.

Within the areas open for consideration of mineral leasing, the NPS will adhere to the processes outlined in the "NPS Procedures for Managing Federal Mineral Leasing and Operations" prepared by the NPS in December 1984. This document is available for public review at the park and in the regional office in San Francisco as well as the Mining and Minerals offices in Denver and Washington.

Table 2: Proposed Action Management Zoning Explanation

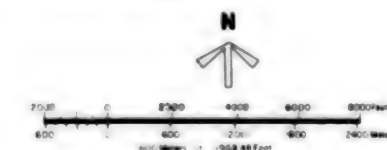
<u>Area</u>	<u>Zoning Criteria*</u>	<u>Zone</u>	<u>Rationale</u>
1A	1,4	Natural Environment	Protection of scenic views within Whiskeytown Lake viewshed
1B	1,4	Natural Environment	Protection of views from popular scenic drive within Crystal Creek viewshed
2	1,4	Natural Environment	Protection of Crystal Creek viewshed
3	-	Bureau of Reclamation Project Lands	Clear Creek Tunnel and access routes
4	4	Development	Crystal Creek 1 primitive campground
5	3	Historic/Archeological	Tower House Historic District on National Register since 1973
6	1,4	Natural Environment	Protection of Whiskeytown Lake viewsheds
7	4	Development	Private Residence-Inholding
8	4	Development	Carr Powerhouse area
9	1,4	Natural Environment	Protection of scenic view from Whiskeytown Lake
10	3	Historic/Archeological	Great Water Ditch Trail route
11	4	Development	Oak Bottom developed area
11A	4	Development	Private Residence-Inholding
12	1,4	Natural Environment	Protection of scenic views from Whiskeytown Lake
13	4	Development	Private Residence-Inholding
14	4	Development	Whiskey Creek, picnic area

<u>Area</u>	<u>Zoning Criteria*</u>	<u>Zone</u>	<u>Rationale</u>
15	4	Development	Whiskey Creek group picnic area
16	4	Development	Whiskeytown store and post office
17	1,4	Natural Environment	Protection of scenic views from Whiskeytown Lake
18	2	Environmental Protection	Habitat for <u>Arnica venosa</u> a rare plant
19	4	Development	Mexican Spring primitive campsites
20	-	Bureau of Reclamation	Spring Creek Tunnel Project Lands
21A-D	1,4	Natural Environment	Protection of Scenic views in the Redding viewshed
22A	4	Development	NPS visitor center
22B	4	Development	NPS park headquarters
23	4	Development	Private residence-inholding
24	4	Bureau of Reclamation Project Lands	Whiskeytown Dam and related facilities
25	1,4	Natural Environment	Protection of scenic views within the Whiskeytown Lake viewshed
26	3	Historic/Archeological	Lower Clear Creek Archeological District - nominated to the National Register
27	-	Resource Utilization	Area removed from all viewsheds and areas of unstable soils
28	1,4	Natural Environment	Out of major viewsheds, protection of views from Mule Town Road
29	1,4	Outstanding Natural Feature	Clear Creek Canyon, scenic deep rocky gorge



ACREAGE		NATURAL ZONE
4,481		ENVIRONMENTAL PROTECTION SUBZONE
455		OUTSTANDING NATURAL FEATURE SUBZONE
29,439		NATURAL ENVIRONMENT SUBZONE
		SOILS: SOUTHWEST OF THIS LINE ARE DECOMPOSED GRANITE
		SCENIC VIEWSHED BOUNDARY
1,160		HISTORIC / ARCHEOLOGICAL ZONE
		DEVELOPMENT ZONE
1,169		DEVELOPMENT SUBZONE
		PRIMARY ROAD
		SECONDARY ROAD
		4 WHEEL DRIVE ROAD
		EXISTING TRAIL
		PROPOSED TRAIL
		SPECIAL USE ZONE
3,200		RESERVOIR SUBZONE
390		BUREAU OF RECLAMATION PROJECT LANDS SUBZONE
44		SPECIAL USE
1,575		RESOURCE UTILIZATION SUBZONE
590		UTILITY CORRIDOR SUBZONE
42,503		TOTAL

* Mineral leasing is only permitted in the Resource Utilization Subzone
 ** Numbered areas (1-72) are described in the table entitled Management Zoning Explanation



PROPOSED ACTION
MANAGEMENT ZONING
 WHISKEYTOWN UNIT
 WHISKEYTOWN / SHASTA / TRINITY
 NATIONAL RECREATION AREA
 CALIFORNIA
 UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE

<u>Area</u>	<u>Zoning Criteria*</u>	<u>Zone</u>	<u>Rationale</u>
30	1,2,4,	Natural Environment	Protection of scenic views, and unstable soils within Crystal Creek viewshed
31	2	Environmental Protection	Virgin timber stand**
32	-	Special Use	California Division of Forestry Conservation Camp
33	4	Development	Primitive campsites
34	4	Development	Crystal Creek 2 - primitive campsites
35	1,4	Outstanding Natural Feature	Crystal Creek Falls - cascades over 265 vertical feet in three slightly separated falls in a steep- walled fern lined canyon
36A	1,2,4	Natural Environment	Protection of scenic views and unstable soils within the Crystal Creek viewshed
36B	1,4	Natural Environment	Protection of scenic views within the Whiskeytown Lake viewshed
37	2	Environmental Protection	Virgin timber stand**
38	1,4	Outstanding Natural	Boulder Creek Falls Feature
39	1,4	Natural Environment	Protection of scenic views within the Whiskeytown Lake viewshed
40	4	Development	Boulder Creek 2 - primitive campsites
41	4	Development	Boulder Creek 1 - primitive campsites
42	4	Development	Primitive campsites

<u>Area</u>	<u>Zoning Criteria*</u>	<u>Zone</u>	<u>Rationale</u>
43	1,4	Natural Environment	Protection of scenic views within the Whiskeytown Lake viewshed
44	4	Development	Brandy Creek developed area
45	2	Environmental Protection	Virgin timber stand**, unstable soils
46	1,2,4	Natural Environment	Protection of scenic views and unstable soils within the Crystal Creek viewshed
47	2	Environmental Protection	Virgin timber stand**, unstable soils
48A	1,2,4	Natural Environment	Protection of scenic views and unstable soils within Crystal Creek viewshed
48B	1,2,4	Natural Environment	Protection of scenic views and unstable soils within Whiskeytown Lake viewshed
49	2	Environmental Protection	Virgin timber stand**
50	1,2,4	Natural Environment	Protection of scenic views and unstable soils within Crystal Creek viewshed
51	4	Development	Coggins Park - primitive campsites
52	2	Environmental Protection	Virgin timber stand**, unstable soils
53	4	Development	Primitive campsites
54	2	Natural Environment	Protection of unstable soils, out of all major viewsheds
55	1,2	Natural Environment	Protection of scenic views and unstable soils within the Crystal Creek viewshed

<u>Area</u>	<u>Zoning Criteria*</u>	<u>Zone</u>	<u>Rationale</u>
56	-	Special Use	Sacramento Television Corporation transmission towers - summit of Shasta Bally - long-term lease
57	2	Natural Environment	Protection of unstable soils out of all major viewsheds
58	1,4	Outstanding Natural	Brandy Creek Falls Feature
59	1,4	Natural Environment	Protection of scenic views and unstable soils within the Whiskeytown Lake viewshed
60	4	Development	Primitive campsites
61	2	Natural Environment	Protection of unstable soils out of all major viewsheds
62	4	Development	Brandy Creek - primitive campsites
63	4	Development	Sheep Camp - primitive campsites
64	4	Development	Brandy Creek 1 - primitive campsites
65	1,4	Natural Environment	Protection of scenic views within the Whiskeytown Lake viewshed
66A,B	1,2	Environmental Protection	Protection of Bald Eagle nesting area and Whiskeytown Lake viewshed
67	4	Development	Peltier Valley - primitive campsites
68	4	Development	Peltier Bridge - primitive campsites

<u>Area</u>	<u>Zoning Criteria*</u>	<u>Zone</u>	<u>Rationale</u>
69	4	Development	Clear Creek National Environmental Education Development Camp
70	3	Historical/Archeological	Proposed interpretive trail along remnants of Clear Creek water ditch
71	2	Natural Environment	Protection of unstable soils out of all major viewsheds
72	2	Natural Environment	Protection of unstable soils out of all major viewsheds

***Zoning criteria**

- 1) Scenic Features
- 2) Scientific Features
- 3) Historic Features
- 4) Other values contributing to public enjoyment

****Refer to discussion on page 31**

Mining and Minerals Management

Areas within the unit where mineral leasing and other mineral activity would be considered are identified on the Proposed Management Zoning map. Because not every area of the park is suitable for mineral development, the plan provides the basis for the long-term allocation of land and water resources in the unit by establishing management zones that clearly identify areas where protection of natural, cultural, and recreational resources are the highest priority. The remaining areas are then placed in the special use zone where more intensive land uses such as mineral leasing can be considered.

Following finalization of the master plan amendment, the excepted areas defined in 43 CFR 3109.2(d)(1) and 3582.2-2(b) will be revised to be consistent with the selected alternatives for the amendment and the corresponding Management Zoning map.

Three types of mineral rights within the unit are addressed below:

Mineral leases - Federal mineral leasing is authorized within the unit by the enabling legislation. Leases and permits are issued by the Bureau of Land Management subject to review and consent of the National Park Service. Regulations governing issuance of leases and permits and operations conducted on them are contained in 43 CFR 3100 for oil and gas and 3500 for solid minerals other than coal and oil shale. The National Park Service has prepared a procedures manual which outlines the requirements of the mineral leasing regulations.

There are currently no existing mineral leases within the Whiskeytown unit. Since 1983 there have been seven mineral lease applications totaling 2,560 acres within the unit. Four of these applications have been rejected by the Bureau of Land Management and three are still under review by the National Park Service. The three applications awaiting NPS and BLM action will be reviewed once this amendment is approved. Those falling within the resource utilization subzone will be considered, those outside will be rejected.

Prior to the 1984 moratorium, lease applications were processed on a case-by-case basis by park personnel on those lands not excepted from leasing by the mineral leasing regulations (43 CFR 3109.2(d)(1) and 3582.2-2(b)). Leases were approved only if activities permitted under the lease "will not have significant adverse effect upon the resources or administration of the area." The dilemma of that mineral leasing system is that most of the unit was open to consideration of mineral leasing (60 percent) and much of this area contains the resources of scenic, scientific, historic, or other values which should be preserved according to the enabling legislation. The Park Service anticipates that once the master plan amendment has been approved, the mineral leasing program will be reactivated.

Following completion of this amendment, the excepted areas would be revised through the rule-making process to make them consistent

with the amendment management zones. Only the resource utilization subzone would remain open to mineral leasing consideration. To facilitate the processing of mineral lease and prospecting permit applications and to ensure equitable treatment of all applications, the National Park Service prepared "Procedures for Managing Federal Mineral Leasing and Operations," which were finalized in December 1984.

Mining Claims - Rights established under the 1872 mining law allows individuals to stake and file claims for certain minerals on federal lands. On November 8, 1965, the unit was closed to further mineral entry (i.e., the right to stake new claims) under the 1872 law by the enabling legislation. However, valid rights were established before withdrawal of the recreation lands. Operations proposed on valid existing mining claims are subject to NPS approval pursuant to regulations contained in 36 CFR 9A.

The regulations require NPS approval of a plan of operations before any activity can take place on the claim. There is no activity currently taking place on the one patented claim occurring within unit boundaries, and new activity would continue to be evaluated on a case-by-case basis. Currently only part of one patented claim consisting of 4.10 acres, and one unpatented claim consisting of approximately 20 acres occur within the unit. Although the patented claim existed before the unit was established, it has not shown any activity in mineral development. Within the last 20 years, only the unpatented Northstar Lode claim has been developed.

None of the alternatives affect an owner's right to develop the mineral resources on any patented or valid unpatented mining claim. However, if the owner proposed development of the minerals, the National Park Service might wish to negotiate acquisition of these rights through purchase, exchange, or donation as identified in the Land Protection Plan (February 1986), or to pursue other protection alternatives.

Nonfederal Mineral Reservations - Mineral reservations exist because the federal government did not gain title to all the mineral rights when the unit was established. These rights are held by private individuals or corporations. Regulations governing operations on privately held subsurface oil and gas rights are contained in 36 CFR 9B. No regulations currently exist governing the extraction of nonfederal minerals other than oil and gas.

Nonfederal ownership of mineral reservations exists on 211.50 acres in several areas adjacent to California Highway 299 within the unit. None of these mineral interests have been developed. The current NPS management policy for these lands is to pursue acquisition of outstanding mineral ownership interests (once other means have been exhausted) in all areas of the unit not suitable for mineral development activity. In most cases, that means anywhere these rights exist outside the resource utilization subzone. The National Park Service would manage the surface of those lands as zoned until

such time as the owners indicate a desire to exercise their rights to the minerals. The National Park Service may then wish to negotiate acquisition of the rights through purchase, exchange, or donation, or to pursue other protection alternatives.

Two additional alternatives have been developed for Management Zoning at Whiskeytown. These include:

B) NO ACTION ALTERNATIVE

Under the no-action alternative mineral development within the unit would be managed (as it was prior to the 1984 moratorium) according to the no-action management zoning map. This map is based on the 1976 Mineral Leasing and Excepted Areas map and regulations that define areas where mineral leasing would be considered on a case-by-case basis and where it is closed (excepted from) to leasing. Accordingly, mineral leasing can currently be considered on a case-by-case basis in most of the class 3 natural environment area zone. Because of this situation, the no-action alternative varies from the definitions of management emphasis presented in table 1.

Under the no-action alternative, existing developments are zoned class 1, high density recreation area. Approved roads are included in class 2, general outdoor recreation area. Historic and archeological sites are in class 6, the historic area zone. Most of the unit is in the class 3 natural environment area zone under the no-action alternative, since this zone includes all lands in the unit not included in one of the previous zones.

Significant natural resources are in the class 4 outstanding natural area zones. Because more resource data has become available during this planning process to more accurately define the significant natural resources, many of those resources identified in the "Affected Environment" section and shown on the proposed action Management Zoning map are not in the outstanding natural area zone under this alternative.

For mineral leasing and development the 1976 Mineral Leasing and Excepted Areas map would remain in effect. The only areas of the unit where leasing is categorically excluded (i.e., excepted) are those areas shown on the 1976 Mineral Leasing and Excepted Areas map. These areas are:

1. All waters of the Whiskeytown Lake and all lands within one mile of that lake measured from the shoreline at maximum surface elevation.
2. All lands classified as high density recreation, general outdoor recreation, outstanding natural, and historic, as shown on the map numbered 611-20, 004B, dated April 1976, entitled "Land Classification, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area."
3. All lands within Section 34, Township 33 North, Range 7 West, MDM, California.

Lease applications are considered within all other lands of the unit, subject to a determination of effect upon surrounding park resources. Applications are reviewed through the NEPA process, which identifies significant resources. Those resources are then either excluded from the lease or stipulations are applied to mitigate the impact to them.

Currently, 25,430 acres of the unit (60%) are open to consideration for mineral leasing, and the remaining 17,073 (40%) are closed. An additional 235 acres remain available for potential mineral development on patented/unpatented mining claims and nonfederal mineral rights. Lands containing nonfederal mineral rights might occur in any of the management zones. When this occurs, the National Park Service would manage the surface of those lands according to the surrounding zoning category, subject to the exercise of the nonfederal right. The three leases currently under NPS review exist within two management zones--class 3, natural area and class 2, general outdoor recreation area.

C) EXCEPT THE ENTIRE AREA TO LEASING

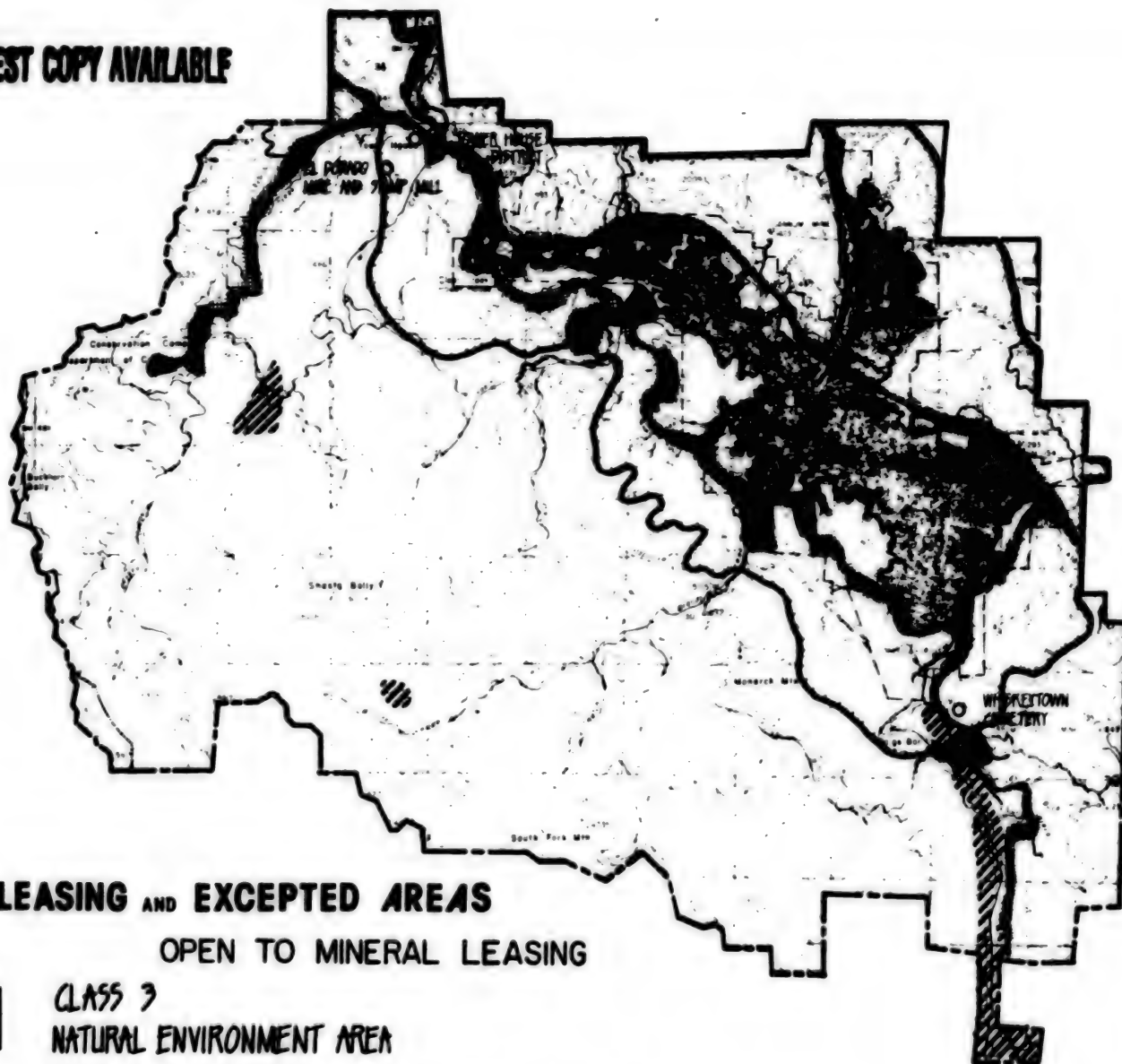
Under alternative C the management zoning includes existing developments and approved roads in the development zone. This zone is unchanged from the proposed action. Likewise, the historic/archeological zone is the same size for this alternative as the proposed action (for acreages refer to table 1). The zoning categories explained in table 1 are applicable for alternative C and the proposed action; the no-action alternative varies from the definitions.

Because the objective of alternative C is maximum protection of natural resources, only the minimum amount of land area would be used for resource utilization.

Since the resource analysis revealed only 1,575 acres or 4 percent of the area suitable for mineral leasing, for administrative efficiency, the entire area would be closed to mineral leasing in this alternative. Administrative efficiency in this context means the NPS personnel time and cost involved in processing lease applications, developing resource protection stipulations for each lease, and monitoring of the applicant's compliance with the terms of the lease. Precedent for consideration of such an alternative in a National Park Service area was set at Lake Chelan National Recreation Area, which is now closed to mineral leasing. In a review of the resources within Lake Chelan NRA, only 5 percent of the area was found suitable for leasing. As a result of that analysis that area was closed to mineral leasing for administrative efficiency.

The only difference between this alternative and the proposed action is that there is no resource utilization subzone of the special use zone. Lands containing nonfederal mineral rights might occur in any of the management zones. When this occurs, the National Park Service would manage the surface of those lands according to the surrounding zoning category, subject to the exercise of the nonfederal right.

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MINERAL LEASING AND EXCEPTED AREAS

OPEN TO MINERAL LEASING



CLASS 3
NATURAL ENVIRONMENT AREA

CLOSED TO MINERAL LEASING



CLASS 1
HIGH DENSITY RECREATION AREA



CLASS 2
GENERAL OUTDOOR RECREATION AREA
vehicular access corridors and visitor convergence points



CLASS 4
OUTSTANDING NATURAL AREA
Clear Creek canyon and road
falls on Crystal Creek and Brandy Creek

CLASS 5
PRIMITIVE AREA
(none)

CLASS 6
HISTORIC AREA



Area within 1 mile Whiskeytown Lake
and section 34



Original Bureau of Reclamation
withdrawn lands

SEE "WATER ZONES" FOR LAKE CLASSIFICATION

NO-ACTION ALTERNATIVE
MANAGEMENT ZONING

WHISKEYTOWN UNIT
WHISKEYTOWN / SHASTA / TRINITY NATIONAL RECREATION AREA



26

AFFECTED ENVIRONMENT

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AFFECTED ENVIRONMENT

Whiskeytown-Shasta-Trinity National Recreation Area was established by Congress on November 8, 1965 "in order to provide . . . for the public outdoor recreation use and enjoyment . . . by present and future generations and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters." Whiskeytown is administered by the National Park Service; the U.S. Forest Service administers the Shasta and Trinity Units.

The Whiskeytown unit consists of 42,503 acres of which 3,200 acres comprise Whiskeytown Lake. The lake has approximately 36 miles of shoreline and a 200 foot maximum depth. Whiskeytown Dam and lake are on Clear Creek, a tributary of the Sacramento River. The Bureau of Reclamation administers the dam, lake, and support facilities for power generation, irrigation, and flood control as part of the Central Valley Project.

Since the management zoning alternatives are keyed to protecting the scenic, scientific, historic, and other values mentioned in the enabling legislation, the Affected Environment and Environmental Consequences sections are also set up to treat these four topics. Since the alternatives deal with mineral development a fifth topic on that subject will be added to each section.

SCENIC FEATURES

The scenic features of the Whiskeytown unit have been divided into three major viewsheds (see Scenic Viewsheds map in the Alternatives section). These viewsheds are: 1) Whiskeytown Lake, 2) Crystal Creek, and 3) Redding. A fourth area indicated on the viewsheds map consists of those areas which are out of view from most scenic viewpoints in the area, and are therefore less important for preserving the scenic features of the unit.

From the information center on California Highway 299, almost the entire Whiskeytown Lake viewshed can be seen. The 3,200-acre lake extends to the northwest, the highway moves parallel with the north shore of the lake with its brushy, treeless steep slopes, and the wooded shores rise to high forested ridges dominated by the 6,209-foot peak of Shasta Bally on the southwest. It is a ruggedly beautiful scene across the lake with the surrounding steep, tree-covered hills mirrored on its surface. Below Shasta Bally are two major waterfalls--Brandy Creek and Crystal Creek falls. The latter is composed of a series of three falls with a combined height of 265 feet. The north side of the lake has been sharply cut by the construction of California 299.

The hills above the highway are steep and exposed to the hot, drying influence of the sun. This area is a brushland of manzanita, toyon, and poison oak with sparse growths of oaks and pines standing above the

brush. Smelter operations during the period of the World War I killed almost all the large trees on this side of the lake, and they have been slow to reforest. This vegetative type is in harsh contrast to the lake's cool waters and the forested south shore. Whiskey Creek and Oak Bottom contains the only land that is flat enough to accommodate recreational facilities. These sites have some groves of small pine and oaks which provide shade for visitors.

By contrast, the land on the south side of the lake contains the major flat areas adjacent to the shoreline. This land is situated near the streams that flow down from the steep canyons and slopes of the mountainous terrain that compose the southern backdrop of the lake. These lakeshore flat areas contain the recreational developments of Brandy Creek and Dry Creek.

The hills above the south shore rise to high ridges topped by Shasta Bally--the highest and dominating point in the unit. These hills are covered with the remains of once vast coniferous forests, and much of its surface is scarred by logging with resulting erosion occurring within the last quarter century. Since the forest is recovering, these effects are not readily visible from the highway across the lake.

The Crystal Creek viewshed is much smaller than the Whiskeytown Lake viewshed. Since it contains a well maintained paved road its rugged scenic beauty is a very popular tourist drive and entrance route to the backcountry. This viewshed essentially consists of the Crystal Creek watershed.

The Redding viewshed is the smallest indicated on the Scenic Viewshed map. Since it consists of a prominent ridge which is highly visible from the city of Redding and to all visitors entering the area on California Highway 299 it is a highly significant scenic resource.

South of the dam along Clear Creek and out of the Whiskeytown Lake viewshed, the land flattens until it reaches the southern boundary of the unit. The stream continues in a steep-walled canyon where easement rights have been added to the unit for a distance of about one mile below the established boundary. Additional areas indicated on the Scenic Viewshed map are in the backcountry and out of view of most visitors.

The steep and rugged topography that characterizes most of the area limits the amount and type of development which can be done without visual intrusion in the backcountry. Even low-grade, narrow roads and trails cause highly visible cuts and fills. Many of the old logging and haul roads which have not been retained for public use are being stabilized and reseeded, to reduce visual impact.

SCIENTIFIC FEATURES

Geology and Soils. The geology and soils are in many respects typical of the southern Klamath Mountains of which the unit is a part. Whiskeytown Lake is surrounded by these rugged mountains with the Shasta Bally batholith being the dominant structural feature. The highly erodible soils of the batholith area are derived from the decomposition of granitic rock and underlie approximately the southwest 1/3 of the unit. It is the only widespread, highly unstable soil in the park.

Decomposed granitic soils of the Shasta Bally batholith area comprise most of the forested lands within the unit. These soils are highly erodible and cannot sustain mineral development or the timber cutting as practiced in the past. Serious adverse consequences to the total watershed due to past logging and mining practices include: erosion, road and trail washouts, siltation of the reservoir and streams, and a lowering of total water and scenic quality. Recent logging has also reduced the water-holding capacity of the soil, causing excessive runoff during periods of high precipitation and reducing minor stream and spring flows during the dry season. This lack of available water year-round, except in the reservoir and major streams, affects the distribution of visitor use and wildlife.

Vegetation. Vegetative cover on the lower elevations of the Whiskeytown unit is dominated by dense growth of brush. Vegetative cover includes manzanita, toyon, ceanothus, poison oak, scrub oak, and digger pine. Dense coniferous forests of sugar pine, ponderosa pine, Douglas fir, and incense cedar dominate the higher elevations. Under previous (pre-NPS) management, logging was conducted on an alternate section basis. All but 6 square miles of the unit's forests have been logged, most of this occurring in the last 25 years. These 6 sections (areas 21, 37, 45, 47, 49, and 52) have never been logged and support virgin timber stands which have been zoned Environmental Protection on the Management Zoning map. The logged areas are rejuvenating and, depending on the amount of soil disturbance, will be forested again in about 50 years. White alder, willows, cottonwood, and big leaf maple are the most common plant species found in the riparian zones surrounding the lake and streams.

Wildlife. Wildlife species include the black bear, black-tailed deer, turkey, many species of waterfowl, osprey and bald eagles. Native fish species include rainbow trout, Sacramento squawfish, Sacramento sucker, hardhead, California roach, and riffle sculpin. Many of these fish species reside in Whiskeytown Lake. Introduced coldwater species include brown trout and Kokanee salmon. Non-native warmwater species include largemouth bass, smallmouth bass, spotted bass, bluegill sunfish, crappie, threadfin shad, and brown bullhead.

Whiskeytown Lake thermally stratifies in the summer with a warm upper layer and cold lower layer. The lake supports a two-story fisheries with bass, sunfish, catfish, and crappie being the predominant species in the upper warm strata and coldwater species residing in the cold lower layer.

Tributaries of both Clear Creek and the lake, with fish habitat within the unit, include Clear, Crystal, Mill, Boulder, Brandy, Whiskey creeks and Grizzly Gulch. Four creeks that have watersheds entirely within the unit are Crystal, Boulder, Mill, and Brandy creeks. Past placer mining operations and deposition of eroded material from previous road construction, dam construction, tailings, and logging has significantly altered stream fish habitat.

These seven streams support resident rainbow trout populations. The streams with bottom gravel used by Kokanee salmon for spawning include the lower reaches of Brandy, Boulder, Whiskey creeks, Grizzly Gulch, and Clear Creek above the lake to French Gulch. The lower reach of Whiskey Creek is the most important Kokanee salmon spawning area in the unit. Self-sustaining populations of rainbow trout and brown trout are present in Clear Creek below the dam. This section of Clear Creek is a popular fishing area in the spring and early summer. The California Department of Fish and Game supplement the trout populations in lower Clear Creek to compensate for the high fishing pressure. Brandy Creek and Crystal Creek are the only other streams that receive fishing pressure. Because of the low number of fish in Boulder, Mill, Whiskey Creeks, and Grizzly Gulch fishing pressure is very low to nonexistent.

The condition of surrounding watersheds has a direct influence on the quality of fishery habitat. Stream fish habitat quality in the Whiskeytown unit is poor except for Clear Creek below Whiskeytown Dam. The factors limiting trout habitat quality in the unit are high stream bed sand load and moderate to extreme annual flow fluctuations. Abnormally high stream bed load is due to unstable soil erosion from roads, tailings, and past logging activity within and surrounding Whiskeytown. High sediment input has changed Whiskeytown stream channel morphology. Stream sediment fills deep pools, reduces average depth, increases water velocity, reduces static water volume, and reduces instream cover. These changes in channel morphology all have a negative effect on trout populations within the unit, especially the early life stages. Heavy winter rains at Whiskeytown result in high watershed erosion and stream flows. During high discharge, streams are at their peak sediment transporting ability. Impacts of sand loading in Whiskeytown streams on trout fisheries will be long term until efficient erosion control methods are implemented. High water temperatures and pollution from mine tailings outside the unit are limiting to salmonoids in Clear Creek above Whiskeytown Lake. Reported water temperatures in upper Clear Creek above 80°F far exceed optimum summer water temperatures for rainbow and brown trout, which range from 55° to 65°F. Pollution from mining activities is also the probable cause of low pH and heavy metals at concentrations detrimental to aquatic organisms which were reported in Willow Creek, a tributary of upper Clear Creek. Overall, fish populations are small to nonexistent in Whiskeytown streams.

Endangered, Threatened, Rare, or Endemic Species. Currently only two species found within the Whiskeytown unit fall into this category. Their distribution and status are listed in Table 3.

Table 3: Distribution and Status of Endangered, Threatened, Rare, or Endemic Species

Species	Common Name	Distribution ^a	Status ^b			Legal Classification ^c	
			Rarity	Endangerment	Distribution	U S F W S ^d	California
<u>Animals</u>							
<i>Haliaeetus leucocephalus</i>	bald eagle	66, A, B	3	3	2	E	E
<u>Plants</u>							
<i>Arnica venosa</i>	Shasta County arnica	18	1	1	2	C2 ^e	

^aRecorded distribution within the Whiskeytown unit. Numbers are keyed to the Proposed Action Management zoning map.

^bStatus (based on California Native Plant Society Classification)

Rarity 1-Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2-Occurrence confined to several populations or to one extended population.
3-Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

Endangerment 1-Not endangered
2-Endangered in a portion of its range
3-Endangered throughout its range

Distribution 1-More or less widespread outside California
2-Rare outside California
3-Endemic to California

^cLegal Classification (all animals are protected within the monument):

E - Endangered
T - Threatened
R - Rare (protected species)
P - Protected

^dOfficial U.S. Endangered Species List as maintained by U.S. Fish and Wildlife Service. Species listed as endangered or threatened on federal list are also similarly listed by states where species occur.

^eC2 = Threat and/or distribution data are insufficient to support federal listing

HISTORIC FEATURES

Since few archeological investigations have been conducted in the Whiskeytown area, little is known about the prehistoric record of the unit. However, the Wintu people, a widespread group centered in the northern Sacramento Valley, are known to have used the Whiskeytown area at the time of European contact. Baker's (1984) recent archeological excavations along Clear Creek in the Tower House Archeological District showed that the Wintu were relatively recent occupants, perhaps residing there after 1600 A.D. He also showed that pre-Wintu people had inhabited the area for approximately the 4,500 years preceding. Prehistoric use of the unit included permanent settlements, seasonal camps, specific resource procurement, and sacred sites.

The only major archeological survey conducted in the Whiskeytown unit concentrated on lands to be inundated by the reservoir. Of the 35 prehistoric sites recorded at that time, about 21 were later flooded. Elsewhere in the unit, less than 1 percent of the lands have been surveyed and approximately 36 cultural resources are recorded. Unfortunately, the current condition of many of these resources is not known. Prehistoric cultural resources in process of nomination to the National Register of Historic Places include: The Tower House Archeological District (ten aboriginal sites near Clear, Crystal, Mill, and Willow creeks) and the lower Clear Creek Archeological District below the Whiskeytown Dam (six aboriginal sites near Clear, Paige Boulder, Salt, and Orofino Gulch creeks).

The earliest known Europeans to reach the vicinity were Jedediah Smith and his party in 1828. Major Pierson B. Reading discovered gold in Clear Creek two decades later. In 1849, the miners and prospectors who arrived shortly after hearing of Reading's discovery established the town of Whiskey Creek, which was later renamed Whiskeytown. This mining community was settled near Clear Creek at the confluence of Whiskey and Brandy creeks. The town site was inundated in 1963 by the waters of Whiskeytown Lake. Levi H. Tower and Charles Camden played major roles in the area's early history. Upstream from Whiskeytown on Clear Creek near the confluence of Willow Creek, these two early miners and businessmen built accommodations and maintained a toll road for travelers. The original inn built by Tower, known as the Tower House, burned down in 1919.

Many of the original Tower and Camden buildings are now included as part of the Tower House District, which is listed on the National Register. It encompasses 14 sites and structures on 20 acres. An irrigation system developed by Tower and Camden has been nominated for inclusion on the National Register in the Tower House District.

Other known sites from the early gold mining era which are eligible to be on the National Register include the Gamin mine located in the New York Gulch drainage and remnants of the Clear Creek Water Ditch located below Whiskeytown Lake.

OTHER VALUES CONTRIBUTING TO PUBLIC ENJOYMENT

The Whiskeytown Unit is located within Shasta County of north-central California and is approximately 8 miles west of Redding, California. Major access to the unit from Redding is via California State Highway 299. Access to Redding is provided by private motor vehicles, train, bus, and commercial airlines; however, nearly all visitors to the unit arrive via their private vehicles. The Whiskeytown Unit is within about 3.5 hours of driving time from approximately 5.5 million people. The San Francisco Bay Area is about 4.5 hours away and Los Angeles is only a day's drive on Interstate 5.

Visitation to the area has fluctuated since the establishment of Whiskeytown in 1965, reaching a high of 1.6 million visitors in 1976 and again in 1977. This high visitation was a direct result of the drought experienced in California and the fact that the Bureau of Reclamation was able to maintain a normal high elevation at Whiskeytown Lake and not at the others. In 1981 visitation was 1.2 million which is a 6 percent increase from the year before and the first increase since 1976.

Major existing developed sites at Whiskeytown are the visitor center, headquarters, Oak Bottom, Brandy Creek, Whiskey Creek, Dry Creek, National Environmental Education Development (NEED) Camp and Judge Carr Power Plant.

The area is basically a day-use area with very limited frontcountry camping facilities. Camping is limited to Oak Bottom (107 walk-in tent sites and about 75 recreational vehicle parking slots), Dry Creek (160 group capacity), and Brandy Creek (38 recreational vehicle parking slots).

Backcountry camping fluctuates, but is trending upward. This camping is permitted anywhere over one mile from the lake with a valid backcountry use permit.

There are designated picnic sites at Brandy Creek, Oak Bottom, Carr Powerhouse, and Whiskey Creek West. Three group reservation picnic sites are available at Whiskey Creek East. There are designated lifeguard beaches at Brandy Creek and Oak Bottom with unguarded beaches scattered around the lake.

Concession facilities include two snack bars associated with the guarded beaches, two marina facilities in the same general locations, and a dry boat storage area (fenced in lot) at Brandy Creek Marina. Concession facilities are currently adequate.

Participation sports seem to be on the rise with requests each year for a new and different type of event. Whiskeytown Sailing Club sponsors a Memorial Day weekend regatta limited to 300 entries. An annual foot race, the Whiskeytown Lake relay, is approximately 21 miles long using four person teams. The YMCA also sponsors a 3-mile and 6.2-mile run.

There are also a number of other contests involving horseback riding, mountain bicycles and four-wheelers. All this type of activity requires National Park Service involvement and management.

Easements and rights-of-way include high voltage transmission lines of the Department of Energy and Pacific Gas and Electric Company, State Highway 299, a water pipeline for Clear Creek Community Services Water District, telephone cable routes of Pacific Telephone Company, and various Shasta County roads. In addition to these rights-of-way there are numerous parcels with access rights retained by the owner. Nearly all of the above predate establishment of the area.

Some long-term permits were established when the land was originally acquired to accommodate previous uses such as the Crystal Creek Conservation Camp, a minimum security penal institution, under lease to the California Department of Forestry. Another such long-term lease is with Sacramento Television Corporation for a five-acre parcel on the summit of Shasta Baldy to allow for transmission towers.

There are five parcels of privately owned land within the unit. Four parcels are under three acres and the fifth about five acres. One of the sites in addition to being residential contains the Whiskeytown Store and Post Office. There are two residential properties owned by the federal government where the previous owners have life tenancy provision.

The National Environmental Education Development (NEED) Camp and Environmental Study Zone is located in an area below Whiskeytown Dam. It consists of an office, classroom, kitchen and dining room building, cabins for students, a pond, Clear Creek, and 400 acres of surrounding forests. It operates at its full capacity, which is 125 students a day. The NEED camp has been improved by providing winterized structures for the students, additional reforestation, and trails. The Environmental Study Zone surrounding the camp includes three square miles which encompasses most of the immediate watershed and an easily identifiable boundary on the crests of ridges.

MINING AND MINERAL RESOURCE DEVELOPMENT

The basis for this information is a 1984 Minerals Resource Inventory prepared by the National Park Service.

The majority of the lands in the Whiskeytown unit were open to entry, location, and patent under the Mining Law of 1872 prior to the establishment of the recreation area by Congress on November 8, 1965 (P.L. 88-336). Mining claim validity examinations on the withdrawn lands for the unit were conducted by the BLM and NPS mineral examiners from the 1950s through the early 1970s.

The unpatented North Star lode mining claim was the only unpatented claim in the unit to meet the recordation requirements pursuant to Section

8 of the Mining in the Parks Act (PL 94-429). Information pertaining to this claim is as follows:

Commodity: Gold and other valuable minerals
Status: Exploration and development

There are seven mining claim location groups in, or partially in, the Whiskeytown unit which were patented under the provisions of the Mining Law of 1872. Information concerning these patents are contained in Table 4, Patented Mining Claims.

Disposition of leasable and nonleasable minerals from lands in the unit, where authorized, are in accordance with the Servicewide mineral leasing regulations found at 43 CFR Groups 3100 and 3500. Mineral leasing is administered by the Bureau of Land Management in consultation and with the consent of the National Park Service. The current status of mineral lease/prospecting permit applications are contained in Table 5, Mineral Lease Applications.

Significance of Minerals

Gold - Lode. The Whiskeytown unit embraces lands in the French Gulch and the Shasta-Whiskeytown mining districts. The most productive source of lode-gold has been the French Gulch district.

Initial discovery of lode-gold was made in 1852 at the Washington Mine (Secs. 16 and 17, T. 33 N., R. 7 W.). This mine is located approximately three miles northwest of the unit. Other early discoveries included the Franklin, Mad Mule, Niagara, Highland, El Dorado and Brown Bear.

Production from mines in the French Gulch district during the period of 1900 through 1914 averaged from \$300,000 to \$500,000 of gold per year. Lode-gold mining activities in the French Gulch and Shasta-Whiskeytown districts has been sporadic since the initial discovery of placer gold in 1848 until World War II when gold mining operations were shut down. The greatest gold mining activity in the area occurred during the periods following the discoveries of lode-gold deposits in the 1850s and from 1900 to 1914 when operators were paid a premium for silica for use as flux for area copper smelters. An increase in activity also accompanied the depression era. No significant mining related production of lode-gold has occurred in the area since 1942. Gold production from the Shasta-Whiskeytown mining district has been estimated to be approximately 70,000 ounces. A summary of production from mines in the unit are as follows:

Gambrinus - produced \$127,000 of gold in 1912
Mount Shasta - produced \$178,000 of gold from 1897 to 1911
Sunshine - production is unknown

Table 4: Patented Mining Claims (Whiskeytown Unit)

Claims	Section	Location		Min. Survey	Patent		Acres	Tract No.	Status
		Twp.	Range		Number	Date			
Bowery Belle & Flatbush	14 (part)	32N	6W.	MS 5748	972926	1/19/26	41.112		Nontederal (4.10± acres within WHIS)
Gold Dip, Mascott, Gold Cup & Little Gem	26 (part) 27 (part)	32N	6W.	MS 5282	646886	8/30/18	69.40 (69.105)	05-104	Acquired (USA Deed 31)
Happy Jack Con. Quartz Mines (Happy Jack, Mountain View, Nonpareil, Langtry, & Knickerbocker)	28 (part) 33 (part)	32N.	6W.	MS 3163	25317	2/28/95	123.00 (123.96)	05-110	Acquired (USA Deed 6)
Mt. Shasta Quartz Mine	34 (part)	32N.	6W.	MS 3527	29924	10/17/98	11.56	05-126 (old 143)	Acquired (USA Deed 218)
Oro Fino & Gentle Annie	34 (part) 35 (part)	32N.	6W.	MS 5343	838064	12/10/21	35.38	05-127 (old 144)	Acquired (USA Deed 218A)
Black Sentinel Quartz Mine	2 (part) 3 (part)	32N.	7W.	MS 2942	24665	8/01/94	20.66	03-118	Acquired (USA Deed 210)
Chitwood Placer Mine (Gulch Placer)	3 (part) 4 (part) 9 (part) 34 (part)	32N. 32N. 32N. 33N.	7W. 7W. 7W. 7W.	MS 364	1277	4/22/85	94.35	03-119	Acquired (USA Deed 82)

Table 5: Mineral Lease Applications (Whiskeytown Unit)

Serial Number	Applicants	Location		Range	Acres	Commodities	Status
		Section	Twp.				
CA 11849	Steve D. Mayberry Mehrie Jennings Mark Jennings	3(W $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, & W $\frac{1}{2}$ SE $\frac{1}{4}$) 10(W $\frac{1}{2}$ SE $\frac{1}{4}$) 33(N $\frac{1}{2}$ SE $\frac{1}{4}$) 34(NW $\frac{1}{4}$ SW $\frac{1}{4}$, & S $\frac{1}{2}$ SW $\frac{1}{4}$)	31N.	6W.	480.00	Gold (placer)	Application rejected by BLM (5/26/83). Consolidated statement of reasons filed by applicants with IBLA on 2/2/84
CA 11850	Steve D. Mayberry Mehrie Jennings Mark Jennings	34(E $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, & SE $\frac{1}{4}$ SE $\frac{1}{4}$) 35(SW $\frac{1}{4}$ SW $\frac{1}{4}$)	33N.	7W.	280.00	Gold (placer)	Application rejected by BLM (4/13/83). Appeal of BLM filed with IBLA (5/11/83). Consolidated statement of reasons filed by applicants with IBLA on 2/2/84
CA 12492	F. Marshall Smith Inc. Alan R. Berry	34(S $\frac{1}{2}$ NE $\frac{1}{4}$, & SE $\frac{1}{4}$) 35(W $\frac{1}{2}$)	32N.	6W.	560.00	Gold (placer)	Application under review by NPS
CA 12751	John F. Lankford Frank Yager James Carter Daniel Mayberry	34(N $\frac{1}{2}$ NE $\frac{1}{4}$)	32N.	7W.	80.00	Gold and other materials	Application under review by NPS
CA 13114	Chris Frahm	30(NW $\frac{1}{4}$ SW $\frac{1}{4}$) 32(NW $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, & SE $\frac{1}{4}$ SE $\frac{1}{4}$) 3(NW $\frac{1}{4}$ NW $\frac{1}{4}$) 4(NE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$) 9(NW $\frac{1}{4}$ NW $\frac{1}{4}$) 10SW $\frac{1}{4}$ SW $\frac{1}{4}$) 14(NE $\frac{1}{4}$ SW $\frac{1}{4}$) 16(NW $\frac{1}{4}$ NW $\frac{1}{4}$) 25(NE $\frac{1}{4}$ SE $\frac{1}{4}$)	32N.	6. 7W.	680.00	Gold (placer)	Application under review by NPS
CA 13651	David Britton	2(W $\frac{1}{4}$ NW $\frac{1}{4}$ & SE $\frac{1}{4}$ NW $\frac{1}{4}$) 3(NE $\frac{1}{4}$ NE $\frac{1}{4}$)	32N.	7W.	160.00	Gold (placer)	Application rejected by BLM (3/9/83). BLM decision by IBLA (7/25/83 - 74 IBLA 271)
CA 13652	David Britton	27(W $\frac{1}{4}$ SW $\frac{1}{4}$) 28(SE $\frac{1}{4}$ SE $\frac{1}{4}$) 33(NE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, & NE $\frac{1}{4}$ SE $\frac{1}{4}$)	32N.	6W.	320.00	Gold (placer)	Application rejected by BLM (3/9/83). BLM decision affirmed by IBLA (7/25/83 - 74 IBLA 271)

The only active operation in the unit is associated with exploration and development on the unpatented North Star lode mining claim. This mine was located in 1940 and contains several old mining improvements, including the installation of an underground lighting and ventilation system, construction of a mine and mill complex, and the extension and development of underground working, have been made by the current claimants since their acquisition of the claim in 1972. Visible gold can occasionally be observed in the quartz veins. Production of gold has been limited to the milling of hand sorted vein material. There is no record of gold production from the claim. The capacity of the mine/mill complex is about one-half ton per day.

Gold - Placer. Gold was first discovered in 1848 on Clear Creek. As a result of this discovery many placer gold operations and communities were soon established on Clear Creek, its tributaries, and other streams in the area. The richest placer deposits in the area were along Clear Creek near French Gulch and Whiskey Creek. Distribution of gold in these streams was directly related to the significant lode-gold deposits adjacent to and near these drainages.

Information on the quantity of gold recovered from various placer mining methods in the area is not available. The majority of gold production was from stream channel deposits. Principal known placer operations in and near the unit are as follows:

Auclain Suction Dredge - operated from 1947 to 1948 in the Clear Creek drainage

Baker Dry-Land Dredge - operated from 1937 to 1938 in the Clear Creek drainage

B.H.K. Mining Company - operated from 1941 to 1942 in the Boulder Creek drainage

Clear Creek Placer Company - operated from 1941 to 1942 and during the 1950s in the Clear Creek drainage

French Gulch Dredging Company - operated from 1940 to 1941 and in 1946 in the Clear Creek drainage

Hammer Placer Mine - operated in 1947 in the Clear Creek drainage

Lincoln Gold Dredging Company - operated in 1942 and from 1947 to 1948 in the Clear Creek drainage

Vergnes - operated in 1933 in the Clear Creek drainage

No sustained placer mining operations have taken place on lands in the unit since the 1950s. Seven mineral lease/prospecting permit applications

have been filed with the BLM since September 1981. Six of these applications cover prospecting activities for the recovery of placer-gold. Four have been rejected by the BLM on the basis that the applied for lands are located within the excepted area of Whiskeytown that is closed to mineral leasing. See Table 5 for additional information concerning these applications.

Sand and Gravel. Deposits of sand and gravel occupy the stream beds, flood plains, terraces and bars along the drainage patterns of Clear Creek and its tributaries. The rock types in the streams reflect source rocks within the drainages. Areas within and adjacent to Clear Creek and its tributaries are composed of conglomerates and unconsolidated deposits of silt, sand, and gravels.

Lands adjacent to the present Clear Creek stream channel (Secs. 22, 27, 34, and 35, T. 33 N., R. 7 W., MDM) contain dredge tailings from past placer gold operations. Tailings such as these can be an excellent source of course aggregates. There is no available information on past sand and gravel production from areas in the unit.

Talc. The Ganim mine (Sec. 5, T. 32 N., R. 6 W.) was initially developed in the early 1920s as a lode-gold prospect. Talc mineralization was encountered in the mine in the mid 1920s. Several carloads of talc were shipped in 1925 through 1927 and in the early and mid 1940s. There is no record of production talc from the mine since the 1940s and the claim has been abandoned. Interest in the development and marketing of talc during the early 1940s was attributed to the federal government's strategic mineral investigation program.

Leaseable Minerals

Coal - There are no known coal occurrences in or near the unit.

Geothermal - No known geothermal resources occur on lands in or near the unit.

Oil and Gas - There is no information of record on past or present exploration or production of oil and gas from lands in or near the unit.

Since there are no known leaseable minerals within the unit, leaseable minerals will not be discussed in the Environmental Consequences section.

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ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A (PROPOSED ACTION)

IMPACT ON SCENIC FEATURES

Scenic features within all three major viewsheds would be protected from mineral development under the proposed action. Mineral leasing would be confined to the 1,575 acres (4%) of the area zoned resource utilization subzone (RUS). This area is out of all major viewsheds and is also gently sloping which should further minimize the visual impacts from mineral development.

IMPACT ON SCIENTIFIC FEATURES

Vegetation and Wildlife

All scientific features within the unit would be protectively zoned in the proposed action. Such features would include: virgin stands of timber (areas 31, 37, 45, 47, 49, and 52 - see proposed action management zoning map); all areas underlain by the unstable decomposed granite soils; scenic waterfalls (areas 35, 38, 58 - see proposed zoning map) and all park streams outside of the RUS. There are no known scientific features of interest in the 1,575 acres in the RUS which would remain open to mineral leasing.

Endangered, Threatened, Rare, or Endemic Species. This alternative would protectively zone habitat for rare plant and animal species (bald eagle area, 66A,B, Arnica venosa, area 18 - see proposed action management zoning map). There are no endangered, threatened, rare, or endemic species known to exist in the 1,575 acre resource utilization subzone where mineral leasing will be considered. Should mineral activity occur in this area, a re-evaluation will be conducted to ensure that no rare plant or animal species exists or that no migration has occurred. If such species are discovered the necessary protective actions will be taken prior to allowing any mineral development to occur.

IMPACT ON HISTORIC FEATURES

All known historic features within the unit would be protectively zoned in the proposed action. Such features would include the Tower House Historic District, Clear Creek Archeological District, and remnants of the Clear Creek Water Ditch. The only historic features which could be subject to the effects of mineral development would be unknown or undiscovered archeological resources within the 1,575 acres RUS. To minimize potential destruction of archeological resources from mineral development, the National Park Service will survey this area prior to any mineral development. The cost of such a survey should be about \$8,000. According to NPS guidelines and policies, if archeological resources are located during these surveys, the sites would be recorded, and evaluated for significance. If found significant, they will be nominated to the National Register of Historic Places. Until such time that significance is determined, any newly discovered sites would be treated as if they were eligible for nomination. Mining which could have an impact to such a resource would not be allowed to occur.

IMPACT ON OTHER VALUES CONTRIBUTING TO PUBLIC ENJOYMENT

Protectively zoning all scenic, scientific, and historic features within the Whiskeytown unit would contribute to the public's continued enjoyment of these features. The threat of impacts from mineral development on these features would effectively be eliminated. Additionally public safety would be enhanced by confining mineral development to one area within the unit. Hazardous mining areas and mining truck traffic would be much easier to control when confined to one area.

IMPACT ON MINERAL DISPOSITION AND SIGNIFICANCE OF COMMODITY

As discussed in the Affected Environment section of this document, there has not been a significant history of mining in the Whiskeytown area, nor are significant amounts of mining projected for the future, whichever alternative is selected. This EA does not address specific impacts of potential mining in the Whiskeytown unit given the small likelihood of significant mineral development in the park, and the wide variety of potential types of operations.

Mineral operations will be evaluated on a case-by-case basis when plans of operations are submitted by prospective operators. In the event that mining activities are proposed, such activities will be regulated under one of the following sets of regulations: 36 CFR 9A regulations for activities proposed on an existing mining claim; 43 CFR 3100 and 3500 regulations for activities associated with leasing of federal minerals; and 36 CFR 9B regulations for activities proposed on lands containing nonfederal oil and gas resources.

Each of these regulations require submittal of a plan of operations by the operator to the superintendent of the park. The superintendent will review the proposed plan of operations according to the requirements of the applicable regulations. As part of the review process, the superintendent will determine the environmental effects of the proposed operations, will examine potential cumulative effects resulting from all mining operations within the unit, and will meet all NEPA compliance requirements. Having completed such analysis, the superintendent may require stipulations to mitigate impacts as he deems appropriate, and will either approve or deny the plan. Mining operations cannot be permitted that will adversely affect the purposes or administration of the park.

Discussion concerning the effects of the proposed action and the other two alternatives will be presented by commodity. In the proposed action, each section will discuss the mineral commodity and the occurrence as documented by the BLM in their memorandum to the National Park Service of March 13, 1984 and by the USGS in their letter to the National Park Service of April 17, 1984. These two items are contained in the appendix of the 1984 NPS Mineral Resource Inventory. This discussion also applies to the two alternatives, but for sake of brevity is not repeated for each alternative.

Impacts associated with the proposed action and the two alternatives on mineral leasing within the unit are difficult to assess for the following reasons:

- 1) evaluation of the nonleasable minerals is based upon the regional geologic setting and mineral occurrence distribution;
- 2) reliable determinations of mineral resource potential cannot be presented until field and laboratory studies are executed and complete; and,
- 3) available technical information indicate that lands in the unit are without value for the leasable minerals.

Potential and occurrences of minerals in the unit have not received favorable reports from the BLM or the USGS. Impacts and effects to a mineral leasing program from either of the three alternatives will be inconsequential. This is based on the status of interest expressed for the leasing of minerals in the unit. Currently only three lease applications are on file with the BLM and under review by the NPS. Only one unpatented mining claim, the North Star for lode-gold, has kept current with filing requirements. These are indicators of the interest in and the potential of the area for valuable mineral deposits.

Gold (Lode)

There has been no significant production of lode-gold from claims in the unit since the early 1900s and this trend is expected to continue in the future. Total production of gold from mines in the unit was limited to \$340,000. The only current mining related activity in the unit is associated with exploration and development activities on the unpatented North Star lode-gold claim. Although there is no record of production from the mine, it is a very small scale operation. The capacity of the mine/mill complex is about one-half ton per day and production has been limited to milling of hand sorted vein material. Past areas of interest occurred primarily in the Shasta-Whiskeytown mining district (a small percentage of the French Gulch mining district is in the unit) which has been identified as having a low future potential for gold production.

There are presently no known lode-gold occurrences in the unit, and occurrences in the unit are considered to be hypothetical resources. The USGS defines hypothetical resources as "Undiscovered resources that are similar to known mineral bodies and that may be reasonably expected to exist in the same producing district or region under analogous geologic conditions. If exploration confirms their existence and reveals enough information about their quality, grade, and quantity, they will be reclassified as identified resources."

Lode-gold also includes secondary silver, copper, zinc, and lead mineralization. These occurrences when associated with lode-gold primary mineralization are classified as hypothetical resources. These commodities are classified as other resources when they occur as primary mineralization. The USGS defines other resources as "Materials that are too low grade or for other reasons are not considered potentially economic. . ."

Alternative A will leave 1,575 acres available for mineral leasing/prospecting permits in the RUS. Under this alternative one mineral lease application currently under review by the Park Service will not be allowed since it falls outside the RUS. Future filings of mineral lease applications will be permitted only in the RUS. It is expected that impacts to future potential for gold production will be inconsequential. Since gold production within unit boundaries has historically been such a small part of the regional economy, no adverse impact to local or regional economies will occur nor will U.S. gold reserves be impacted.

Gold (Placer)

Clear Creek and its tributaries have been areas of extensive prospecting, exploration, and mining for placer-gold since 1848. Dredging operations have occurred within and adjacent to Clear Creek, Boulder Creek, and Paige Boulder Creek. There have been no sustained commercial placer mining operations in the unit since the 1950s. Occasional gold values may be contained in major drainages and adjacent areas although the gravels have been extensively mined in the past. Only recreational gold panning would be permitted in the unit (including the RUS) under proposed regulations soon to be published in the Federal Register. These proposed regulations were addressed in an environmental assessment issued in July, 1987. Information on past placer-gold production from lands in the unit is not available. Placer-gold occurrences in the unit are hypothetical resources.

Alternative A will allow the continued filing of mineral lease applications to the 1,575 acres contained in the RUS. This alternative will not allow the issuance of leases on two mineral lease applications for placer-gold currently under review since they lie outside the RUS. It is expected that impacts to future potential for gold production will be minimal or negligible. Similarly since gold production within the unit has been such a small part of the regional economy, no adverse impact to local or regional economies will occur nor will U.S. gold reserves be impacted.

Sand and Gravel

Deposits of sand and gravel occur within and adjacent to Clear Creek and its tributaries. There is no sustained production of sand and gravel from the unit and the occurrences are of nominal economic significance due to the lack of demand, available preferred alternative deposits, distances to

markets, and legislative constraints. Sand and gravel occurrences in the unit are subeconomic resources. The USGS defines subeconomic resources as "The part of identified resources that does not meet the economic criteria of reserves and marginal reserves."

Alternative A will allow the disposal of sand and gravel in 1,575 acres in the resource utilization subzone. Areas of favorable occurrences for sand and gravel lie outside of this area primarily in areas already excepted from mineral leasing. Since sand and gravel are subeconomic resources, it is expected that impacts to future sand and gravel production will be inconsequential. Similarly, no adverse impacts to local or regional economies are expected to occur.

Talc

The only identified talc occurrence in the unit is associated with the abandoned and mined out Ganim mine. Production of talc from the mine was very limited and occurred in the 1920s and 1940s. The occurrence of talc is a subeconomic resource.

Since talc production within the unit has never been regionally important, no adverse impacts to local or regional economies are expected to occur from the implementation of alternative A.

Conclusion

Alternative A, the proposed action, allows for consideration of mineral leasing in the 1,575 acres or 4 percent of the unit zoned RUS and prevents the issuance of mineral lease applications in areas lying outside the RUS. This represents a 94 percent reduction in the amount of area open to consideration for mineral leasing. Since mineral production within unit boundaries has historically been such a small part of the regional economy, no adverse impact to local or regional economies will occur nor will U.S. mineral reserves be impacted.

ALTERNATIVE B (NO ACTION)

IMPACT ON SCENIC FEATURES

This alternative has the greatest potential for impact on the scenic features contained within all three major viewsheds. Under this alternative 25,430 acres or 60 percent of the entire unit could be subject to the impacts of mineral development. Such impacts would include removal of surface vegetation and subsequent erosion of soils, placement of tailings piles, and dust from operations. These visual impacts could be especially severe on the steep slopes within the unstable soil areas which are open to mineral leasing in this alternative. Access routes to such mining areas would be an additional and highly visible intrusion on the natural scene.

IMPACT ON SCIENTIFIC FEATURES

Vegetation and Wildlife

This alternative also has the greatest potential for impact on the scientific features within the unit. Such features which are open to mineral leasing and could be damaged or destroyed by mineral development in this alternative include: all six virgin stands of timber (areas 31, 37, 45, 47, 49, and 52 - see proposed action management zoning map), all areas underlain by decomposed granite soils, Boulder Creek Waterfalls (area 38 - see proposed action management zoning map). Additionally, mineral development could affect all park streams both outside the excepted areas, where streams would be more directly affected, and inside the excepted areas, since these areas are downstream of areas where mineral development could occur. While it is unlikely to assume that total destruction of the above features would occur with mineral development, some damage would likely occur once natural systems are disrupted.

Endangered, Threatened, Rare, or Endangered Species. Under this alternative the habitat for Arnica venosa (area 18 - see proposed action management zoning map) could be subject to consideration for mineral leasing and such habitat could be damaged or destroyed. Bald eagle habitat (area 66A,B - see proposed action management zoning map) would be protectively zoned in this alternative.

IMPACT ON HISTORIC FEATURES

This alternative also holds the potential for the greatest impact on historic features particularly unknown archeological resources. Part of the Tower House Historic District and part of the Clear Creek Archeological District would be within the area open to mineral development. Perhaps the most significant impact of this alternative would be to unknown archeological resources which may occur within the 25,430 acres (60%) of the unit which remain open to mineral leasing. Some protection could be afforded by surveying the area prior to mineral development. To minimize potential destruction of archeological resources

from mineral development, the National Park Service will survey this area prior to any mineral development. The cost of such a survey would be about \$130,000. According to NPS guidelines and policies, if archeological resources are located during these surveys, the sites would be recorded, and evaluated for significance. If found significant, they will be nominated to the National Register of Historic Places. Until such time that significance is determined, any newly discovered sites would be treated as if they were eligible for nomination. Mining which could have an impact to such a resource would not be allowed to occur. However, due to the larger area open to mineral development, the likelihood of the irretrievable loss of scientific information from archeological sites in spite of mitigative efforts is much higher than in the other two alternatives.

IMPACT ON OTHER VALUES CONTRIBUTING TO PUBLIC ENJOYMENT

The potential for impacts on other values is also the highest of all three alternatives. Potential damage to the three features discussed above is highest in this alternative therefore the continued enjoyment of these features unimpaired would not be possible. Additionally the effects of mineral development such as visual intrusion, and noise and dust would not be compatible with visitor enjoyment of recreation in a natural setting. This alternative also presents the highest hazard to public safety through mining truck traffic in most areas of the park where mining would occur. Additionally the mining areas themselves would constitute a safety hazard, from the shafts, adits, and pits necessary for mineral development.

IMPACT ON MINERAL DISPOSITION AND SIGNIFICANCE OF COMMODITY

Alternative B, the no action alternative, will maintain the status quo. Approximately 60 percent of the park, comprising 25,430 acres, will remain available for mineral leasing/prospecting permit applications. Operations will be subject to the requirements set forth under the regulations found at 43 CFR Groups 3100 and 3500. Mineral leasing under these regulations is conditioned upon the consent of the Regional Director.

Gold (Lode)

There has been no significant production of lode-gold from claims within the unit since the early 1900s. The only current mining activity is on the unpatented North Star lode-gold claim, a small scale operation limited to processing one-half ton of ore per day. There are no other known lode gold occurrences within the area and the USGS considers occurrences to be hypothetical resources (see definition under this impact discussion for the proposed action) in this area.

Alternative B will leave open the 25,430 acres which were available for mineral leasing/prospecting permits before the 1984 moratorium. Under this alternative the one mineral lease application currently under review

by the Park Service would be reviewed, modifications noted, and it would be allowed since it falls within the open area. Future filings of mineral lease applications will be permitted only in the 25,430 acres. It is expected that impacts to future potential for gold production will be inconsequential. Since gold production within unit boundaries has historically been such a small part of the regional economy, although this alternative maintains the largest area open to mineral development, no adverse impact to local or regional economies will occur nor will U.S. gold reserves be impacted.

Gold (Placer)

As in the proposed action, only recreational gold panning would be permitted in the unit under proposed regulations evaluated in an assessment released in July 1987. Since gold production within the unit has been such a small part of the regional economy, no adverse impact to local or regional economies will occur nor will U.S. gold reserves be impacted.

Sand and Gravel

Alternative B will allow the disposal of sand and gravel in the 25,430 acres which were available for mineral leasing/prospecting prior to the 1984 moratorium. Areas of favorable occurrences for sand and gravel lie within areas already excepted from mineral leasing. Since sand and gravel are subeconomic resources, it is expected that impacts to future sand and gravel production will be inconsequential. Similarly, no adverse impacts to local or regional economies are expected to occur.

Talc

The only identified talc occurrence in the unit is associated with the abandoned and mined out Ganim mine. Production of talc from the mine was very limited and occurred in the 1920s and 1940s. The occurrence of talc is a subeconomic resource.

Since talc production within the unit has never been regionally important, no adverse impacts to local or regional economies are expected to occur from the implementation of alternative B.

Conclusion

Alternative B will result in the least impact upon mineral disposal in the unit. Because it is the no action alternative, effects on the local, regional, or U.S. economies will be based on the type and level of activity proposed that will occur each time a mineral lease application/prospecting permit is filed. Based on past production levels of gold, talc, sand and gravel, and other minerals, there will not be future economic resources forthcoming.

ALTERNATIVE C

IMPACT ON SCENIC FEATURES

This alternative would close the entire area to mineral leasing and therefore would protect all the scenic features within the unit from mineral development.

IMPACT ON SCIENTIFIC FEATURES

Vegetation and Wildlife

This alternative would protect the scientific features within the unit from the effects of mineral development by closing the entire area to mineral leasing.

Endangered, Threatened, Rare, or Endemic Species. This alternative would protect both species within the unit, arnica venosa, Area 18 and the bald eagle, area 66A,B - see proposed action management zoning map).

IMPACT ON HISTORIC FEATURES

Closing the area to mineral leasing would protect all historic features within unit boundaries.

IMPACT ON OTHER VALUES CONTRIBUTING TO PUBLIC ENJOYMENT

Closing the area to mineral leasing would also protect these values.

IMPACT ON MINERAL DISPOSITION AND SIGNIFICANCE OF COMMODITY

Alternative C will close the entire unit to the future filing of mineral lease applications/prospecting permits. This alternative will prevent the issuance of mineral leases on applications currently under review by the National Park Service.

Gold (Lode)

Alternative C will not allow for future filings of mineral lease applications. The one application currently under review will be denied. It is expected that impact to future potential for gold production will be minimal or negligible. No adverse impact to local or regional economies will occur nor will U.S. gold reserves be impacted. The basis for this analysis is that past production was limited to \$340,000 over a period of approximately 60 years. No current production exists and activities

associated with lode-gold is limited to exploration work at the North Star claim.

Gold (Placer)

Alternative C will close the entire park to future filings of mineral lease applications/prospecting permits thus preventing any exploration and/or production. This alternative will not allow the issuance of leases on two mineral lease applications currently under review. It is expected that impacts to future potential for gold production will be inconsequential. No adverse impact to local or regional economies will occur nor will U.S. gold reserves be impacted.

Sand and Gravel

Alternative C will close the entire Whiskeytown unit to sand and gravel operations. The primary areas of favorable occurrences are found in areas already excepted to mineral disposal. Due to negligible economic significance of sand and gravel deposits within the unit impacts to future production will be inconsequential. No adverse impacts to local or regional economies are expected to occur.

Talc

Alternative C will close the entire unit to talc operations. Since talc production within the unit has never been regionally important, no adverse impacts to local or regional economies are expected to occur.

Conclusion

Alternative C will close the entire unit to mineral leasing. This alternative provides the greatest amount of protection to park resources and values. Since no minerals in the Whiskeytown unit will be available for leasing, it will also impact the disposition of minerals to a greater extent than the other two alternatives, although no adverse impacts to local or regional economies are expected to occur under any alternative analyzed in this plan.

COMPARISON CHART OF THE ALTERNATIVES

Impacts on	Alternatives		
	A	B	C
Scenic Features	protected	3 major viewsheds could be affected	protected
Scientific Features	protected	virgin timber stands unstable soils 2 rare species all streams 1 waterfall unprotected	protected
Historic Features	protected	part of 1 historic and 1 archeological district affected unknown archeological resources unprotected on 25,430 acres	protected
Other Values	protected	highest safety hazard	protected
Mineral Development	4% area open	60% area open	0% area open

CONSULTATION AND COORDINATION

The following National Park Service offices were involved in the development of the alternatives and the proposed action:

Western Regional Office
Denver Service Center
Mining and Minerals Branch, Washington, D.C.
Whiskeytown Unit

Other Department of the Interior offices consulted:

U.S. Fish and Wildlife Service - being provided a copy of this EA
for concurrence with NPS evaluation of effects on endangered
or threatened species

Bureau of Land Management - being provided a copy of this EA

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